

WHAT IS CLAIMED IS:

1. An information processing apparatus to record streaming data in a storage device, comprising:

a first bus to transfer various data;

5 a first processor that manages, as a file, data recorded in the storage device;

a receiver that receives externally supplied streaming data;

10 a second bus to transfer the streaming data received by the receiver;

a third bus electrically connected to the storage device; and

15 a second processor electrically connected to the first bus, the second bus, and the third bus, and storing in the storage device via the third bus the streaming data input from the receiver via the second bus and file management information input from the first processor via the first bus, in response to an access request input from the first processor via
20 the first bus.

2. The information processing apparatus according to claim 1, wherein the streaming data is broadcast content data, and the receiver includes a tuner unit that receives the broadcast content data.

25 3. The information processing apparatus according to claim 1, wherein the second processor includes a buffer memory assigned within a memory address space

accessible by the first processor and temporarily stores the streaming data input from the receiver via the second bus, and

the first processor sends to the second processor,
5 via the first bus, an access request for instructing the second processor to write the data stored in the buffer memory into the storage device.

4. The information processing apparatus according to claim 1, wherein the second processor includes:

10 a buffer memory assigned within a memory address space accessible by the first processor and temporarily stores the streaming data input from the receiver via the second bus;

means for sending to the first processor, via the
15 first bus, pointer information representing a memory address indicative of a storage location in the buffer memory where the streaming data is stored, and a data size of the stored streaming data, and

the first processor includes:

20 means for generating an access request for instructing the second processor to write the streaming data stored in the buffer memory into the storage device, based on the pointer information sent from the second processor; and

25 means for sending the generated access request to the second processor via the first bus.

5. The information processing apparatus according

to claim 1, wherein the streaming data received by the receiver includes compression-encoded video data, and the second processor includes:

5 a decoder that decodes the streaming data stored in the storage device, in accordance with a decode request sent from the first processor via the first bus; and

10 a video output interface that outputs the decoded streaming data to an external video monitor as video data, in accordance with a reproduction request sent from the first processor via the first bus.

6. The information processing apparatus according to claim 1, wherein the information processing apparatus is connected to a terminal via a network, and
15 the information processing apparatus further includes a third processor electrically connected to the first bus and communicating with the terminal on the network, the third processor issuing, to the second processor via the first bus, a disk access request
20 instructing the second processor to read out the streaming data from the storage device, to transmit the streaming data stored in the storage device to the terminal via the network.

7. The information processing apparatus according to claim 1, further including a fourth bus that
25 transfers display data to the second processor, wherein the second processor includes:

an interface unit that receives the display data from the first processor via the fourth bus; and

means for converting the display data received by the interface unit to video data, which is output to an external video monitor, in accordance with a reproduction request sent from the first processor via the first bus.

8. The information processing apparatus according to claim 1, further including a control bus to connect the receiver and the second processor, wherein

the receiver is a tuner unit that receives broadcast content data composed of streaming data, and

the second processor transmits to the receiver via the control bus, control information indicative of to which channel broadcast program data to be received belongs, in accordance with a channel select request input from the first processor via the first bus.

9. An information processing apparatus to record streaming data in a disk storage device, comprising:

a bus;

a first processor that manages, as a file, data recorded in the disk storage device;

a receiver that receives externally supplied streaming data; and

a second processor that executes, based on a disk access request input from the first processor, a write process to write data and file management information

input via the bus into the disk storage device, and a
read-out process to read out data constituting a file,
which is stored in the disk storage device, onto the
bus, the second processor including a first interface
5 unit electrically connected to the disk storage device,
and a second interface unit electrically connected to
the receiver, and the second processor writing, when a
disk access request from the first processor instructs
writing the streaming data into the disk storage
10 device, the streaming data input from the receiver
to the second interface unit and file management
information input from the first processor via the bus
into the disk storage device via the first interface
unit.

15 10. The information processing apparatus according
to claim 9, wherein the streaming data is broadcast
content data, and the receiver includes a tuner unit
that receives the broadcast content data.

20 11. The information processing apparatus according
to claim 9, wherein the second processor includes
a buffer memory assigned within a memory address space
accessible by the first processor and temporarily
stores the streaming data input to the second interface
unit, and

25 the first processor sends to the second processor,
via the bus, an access request to instruct the second
processor to write the data stored in the buffer memory

into the disk storage device.

12. The information processing apparatus according to claim 9, wherein the second processor includes:

5 a buffer memory assigned within a memory address space accessible by the first processor and temporarily stores the streaming data input to the second interface unit;

means for sending to the first processor, via the bus, pointer information representing a memory address
10 indicative of a storage location on the buffer memory where the streaming data is stored, and a data size of the stored streaming data, and

the first processor includes:

means for generating a disk access request to
15 instruct the second processor to write the streaming data stored in the buffer memory into the disk storage device, based on the pointer information sent from the first processor; and

means for sending the generated disk access
20 request to the second processor via the first bus.

13. The information processing apparatus according to claim 9, wherein the streaming data received by the receiver includes compression-encoded video data, and

the second processor includes:

25 a third interface unit that outputs video data to an external video monitor;

means for decoding the streaming data received by

the receiver, in accordance with a decode request sent from the first processor via the bus; and

means for outputting the decoded streaming data to the third interface unit, in accordance with
5 a reproduction request sent from the first processor via the bus.

14. The information processing apparatus according to claim 9, wherein the information processing apparatus is connected to a terminal via a network, and
10 the information processing apparatus further includes a third processor connected to the bus and communicating with the terminal on the network, the third processor issuing, to the second processor via the bus, a disk access request instructing the second
15 processor to read out the streaming data from the disk storage device, to transmit the streaming data stored in the disk storage device to the terminal via the network.

15. The information processing apparatus according to claim 9, wherein the second processor includes:

a third interface unit that outputs video data to an external video monitor;

a fourth interface unit that receives display data from the first processor; and

25 means for converting the display data received by the fourth interface unit to the video data, which is output to the external video monitor via the third

interface unit, in accordance with a reproduction request sent from the first processor via the bus.

16. The information processing apparatus according to claim 9, further including a control bus to connect
5 the receiver and the second processor, wherein

the receiver is a tuner unit that receives broadcast content data composed of streaming data, and
the second processor transmits, to the receiver via the control bus, control information indicative of
10 to which channel broadcast program data to be received belongs, in accordance with a channel select request input from the first processor.

17. An information processing apparatus, comprising:

15 a storage device;

a first processor that manages, as a file, data recorded in the storage device;

a receiver that receives externally supplied streaming data;

20 a bus to transfer the streaming data received by the receiver; and

a second processor, electrically connected to the bus, adapted to receive the streaming data from the receiver via the bus, and to receive file management
25 information from the first processor.

18. The image processing apparatus according to claim 17, wherein the streaming data is broadcast

content data.

19. The image processing apparatus according to claim 17, further including a second bus to transfer various data, wherein the first processor transmits the
5 file management information to the second processor via the second bus.

20. The image processing apparatus according to claim 17, further including a third bus electrically interconnecting the storage device to the second
10 processor.

21. A method of recording streaming data, comprising:

issuing a channel instruction by a first processor to a second processor indicative of a channel number of
15 broadcast content data to be received;

transmitting control information, from the second processor to a receiver, indicative of a channel to which the broadcast content data to be received belongs, based on the channel instruction issued by
20 the first processor;

receiving the broadcast content data by the receiver and transmitting the broadcast content data to the second processor via a dedicated bus;

writing the broadcast content data received by the second processor into a buffer memory;
25

transmitting pointer information from the second processor to the first processor;

generating a disk access request by the first processor based on the pointer information received from the second processor, and transmitting the disk access request to the second processor; and

5 executing a process to write data into a storage device by the second processor based on the disk access request received from the first processor.

22. An information processing apparatus for recording streaming data in a storage device,
10 comprising:

first bus means for transferring various data;

first processor means for managing, as a file, data recorded in the storage device;

receiver means for receiving externally supplied
15 streaming data;

second bus means for transferring the streaming data received by the receiver;

third bus means electrically connected to the storage device for transferring data; and

20 second processor means electrically connected to the first bus means, the second bus means, and the third bus means for storing in the storage device via the third bus means the streaming data input from the receiver means via the second bus means and file
25 management information input from the first processor means via the first bus means, in response to an access request input from the first processor means via the

first bus means.

23. An information processing apparatus for recording streaming data in a disk storage device, comprising:

5 a bus;

first processor means for managing, as a file, data recorded in the disk storage device;

receiver means for receiving externally supplied streaming data; and

10 second processor means for executing, based on a disk access request input from the first processor means, a write process to write data and file management information input via the bus into the disk storage device, and a read-out process to read out
15 data constituting a file, which is stored in the disk storage device, onto the bus, the second processor means including a first interface unit electrically connected to the disk storage device, a second interface unit electrically connected to the receiver
20 means, and means for writing, when a disk access request from the first processor means instructs writing the streaming data into the disk storage device, the streaming data input from the receiver means to the second interface unit and file management
25 information input from the first processor means via the bus into the disk storage device via the first interface unit.

24. An information processing apparatus,
comprising:

storage means for storing data;

first processor means for managing, as a file,
5 data recorded in the storage means;

receiver means for receiving externally supplied
streaming data;

bus means for transferring the streaming data
received by the receiver means; and

10 second processor means, electrically connected to
the bus means, for receiving the streaming data from
the receiver means via the bus means and receiving file
management information from the first processor means.